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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,332	11/26/2001	Stefan Wilhelm Jung	34648-469USPT P14470US	7410

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EXAMINER	
JONES, PRENELL P	
ART UNIT	**PAPER NUMBER**
2616	

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/994,332	JUNG ET AL.	
	Examiner	Art Unit	
	Prenell P. Jones	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alvesalo et al (US PGPUB 2002/0186710) and Halvorson (US Pat 6,208,859).

Regarding claims 1, Alvesalo et al (US PGPUB 2002/0186710) discloses transmission of resources between networks in a mobile radio wireless system, where the architecture includes

setting an upper limit (peak/maximum) for transmission capacity such as frequency, resources, channels, sub-streams allocated to a network, whereby a maximum amount of frequencies and not all of the channels set up at the frequency is utilized for the connection leaving free/unused channels, wherein assigned channels removed from use with respect to increase interference, whereby the allocation of resources is based on interference measurements (quality of air interface exceeds threshold level/predefined level) carried out as associated with air interference, and wherein the system accommodates circuit switched data calls (Figs. 3-5, paragraph 0018-0020, 0030, 0031, 0040, 0063, 0066, 0076). However, Alvesalo is silent on retaining unused sub-streams/resources/channels. In a radio mobile environment, Halvorson discloses a satellite mobile radio communication system wherein the architecture includes a plurality of mobile stations/mobile terminals in communication with BS or LES or GES defines and distributes the maximum number of channels that can be used to operate in a connection, and all unused channels reside in channel pool, and accommodation for circuit switched data calls is provided (col. 32, line 60 thru col. 33, line 13). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make available unused channels during continuing session as taught by Alvesalo with the teachings of Halvorson for the purpose of further managing allocated resources for user access in a mobile radio environment.

Regarding claims 2-6, 10 and 11, as indicated above, Alvesalo et al (US PGPUB 2002/0186710) discloses transmission of resources between networks in a mobile radio wireless system, where the architecture includes setting an upper limit (peak/maximum) for transmission capacity such as frequency, resources, channels, sub-streams allocated to a network, whereby a maximum amount of frequencies and not all of the channels set up at the frequency is utilized for the connection leaving free/unused channels, wherein assigned

channels removed from use with respect to increase interference, whereby the allocation of resources is based on interference measurements (quality of air interface exceeds threshold level/predefined level) carried out as associated with air interference, and wherein the system accommodates circuit switched data calls (Figs. 3-5, paragraph 0004, 0018-0020, 0030, 0031, 0040, 0063, 0066, 0076). Alvesalo further discloses channels allocated with respect frequency/time-slots (paragraphs 0029-0033), and using a more effective channel coding on a connection to accommodate allocation of resources (paragraph 0035, 0060), and allocation of transmission resources based on mobile terminal/user specific request, such as bandwidth/rate and timing (paragraph 0059 and 0069). Alvesalo further discloses the allocation of transmission resources include sharing/switching between different channel division methods/modulation such as CDMA and TDMA (paragraph 0074).

Regarding claims 7-9, as indicated above, Alvesalo et al (US PGPUB 2002/0186710) discloses transmission of resources between networks in a mobile radio wireless system, where the architecture includes setting an upper limit (peak/maximum) for transmission capacity such as frequency, resources, channels, sub-streams allocated to a network, whereby a maximum amount of frequencies and not all of the channels set up at the frequency is utilized for the connection leaving free/unused channels, wherein assigned channels removed from use with respect to increase interference, whereby the allocation of resources is based on interference measurements (quality of air interface exceeds threshold level/predefined level) carried out as associated with air interference, and wherein the system accommodates circuit switched data calls (Figs. 3-5, paragraph 0018-0020, 0030, 0031, 0040, 0063, 0066, 0076) and Alvesalo further discloses channels allocated with respect frequency/time-slots (paragraphs 0029-0033). Alvesalo is silent on modifying coding with respect to in-band signaling. However, as mentioned

above, Halvorson discloses a satellite mobile radio communication system wherein the architecture includes a plurality of mobile stations/mobile terminals in communication with BS or LES or GES defines and distributes the maximum number of channels that can be used to operate in a connection. Halvorson further discloses making use of or switching to FEC coding during a blockage/interference with respect to outbound and inbound signaling with respect to changes in resources being utilized in a connection, and monitoring blockage/interference which decreases quality of signaling (col. 19, line 19-30, col. 20, line 53 thru col. 21, line 16, thru col. 22, line 61). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement coding with respect to in-band signaling as well as out-bound signaling as taught by Halvorson with the teachings of Alvesalo for the purpose of further managing and monitoring resource in a mobile radio environment.

4. Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alvesalo et al (US PGPUB 2002/0186710) and Halvorson (US Pat 6,208,859), that which is known in the art and Lin et al (US Pat 6,633,555).

Regarding claim 12, as indicated above, Alvesalo et al (US PGPUB 2002/0186710) discloses transmission of resources between networks in a mobile radio wireless system, where the architecture includes setting an upper limit (peak/maximum) for transmission capacity such as frequency, resources, channels, sub-streams allocated to a network, whereby a maximum amount of frequencies and not all of the channels set up at the frequency is utilized for the connection leaving free/unused channels, wherein assigned channels removed from use with respect to increase interference, whereby the allocation of resources is based on interference measurements (quality of air interface exceeds threshold level/predefined level) carried out as

associated with air interference, and wherein the system accommodates circuit switched data calls (Figs. 3-5, paragraph 0018-0020, 0030, 0031, 0040, 0063, 0066, 0076), and Halvorson discloses a satellite mobile radio communication system wherein the architecture includes a plurality of mobile stations/mobile terminals in communication with BS or LES or GES defines and distributes the maximum number of channels that can be used to operate in a connection, and all unused channels reside in channel pool, and accommodation for circuit switched data calls is provided (col. 32, line 60 thru col. 33, line 13). Although, both Alvesalo and Halvorson are silent on a circuit mobile radio environment that includes a BTS, MSC and a BSC coupled to a BTS and MSC for implementing determining, allocating maximum resources and monitoring the interference associated with the radio interface as associated with adjusting utilization of allocated resources, Examiner takes official notice that it is well known in the art that the standard equipment associated in a radio mobile environment consist of BTS, MSC and a BSC coupled to a BTS and MSC. This is illustrated by Lin et al (US Pat 6,633,555) who discloses monitoring air interface interference in a wireless network along with the devices used in a radio environment for implementing, managing and allocating resources to users (Fig. 1, Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement and utilize BTS, MSC and a BSC coupled to a BTS and MSC which is known in the art and further illustrated and taught by Lin for implementing determining, allocating resources and monitoring the interference associated with the radio/air interface as associated with the combined teachings of Alvesalo and Halvorson for the purpose of further implementing and managing allocated resources for user access in a mobile radio environment.

Regarding claims 13-17, 21 and 22, as indicated above, Alvesalo et al (US PGPUB 2002/0186710) discloses transmission of resources between networks in a mobile radio

wireless system, where the architecture includes setting an upper limit (peak/maximum) for transmission capacity such as frequency, resources, channels, sub-streams allocated to a network, whereby a maximum amount of frequencies and not all of the channels set up at the frequency is utilized for the connection leaving free/unused channels, wherein assigned channels removed from use with respect to increase interference, whereby the allocation of resources is based on interference measurements (quality of air interface exceeds threshold level/predefined level) carried out as associated with air interference, and wherein the system accommodates circuit switched data calls (Figs. 3-5, paragraph 0004, 0018-0020, 0030, 0031, 0040, 0063, 0066, 0076). Alvesalo further discloses channels allocated with respect frequency/time-slots (paragraphs 0029-0033), and using a more effective channel coding on a connection to accommodate allocation of resources (paragraph 0035, 0060), and allocation of transmission resources based on mobile terminal/user specific request, such as bandwidth/rate and timing (paragraph 0059 and 0069). Alvesalo further discloses the allocation of transmission resources include sharing/switching between different channel division methods/modulation such as CDMA and TDMA (paragraph 0074).

Regarding claims 18-20, as indicated above, Alvesalo et al (US PGPUB 2002/0186710) discloses transmission of resources between networks in a mobile radio wireless system, where the architecture includes setting an upper limit (peak/maximum) for transmission capacity such as frequency, resources, channels, sub-streams allocated to a network, whereby a maximum amount of frequencies and not all of the channels set up at the frequency is utilized for the connection leaving free/unused channels, wherein assigned channels removed from use with respect to increase interference, whereby the allocation of resources is based on interference measurements (quality of air interface exceeds threshold level/predefined level) carried out as

associated with air interference, and wherein the system accommodates circuit switched data calls (Figs. 3-5, paragraph 0018-0020, 0030, 0031, 0040, 0063, 0066, 0076) and Alvesalo further discloses channels allocated with respect frequency/time-slots (paragraphs 0029-0033), and Lin et al (US Pat 6,633,555) who discloses monitoring air interface interference in a wireless network along with the devices used in a radio environment for implementing, managing and allocating resources to users (Fig. 1, Abstract). But, both Alvesalo and Lin are silent on modifying coding with respect to in-band signaling. However, as mentioned above, Halvorson discloses a satellite mobile radio communication system wherein the architecture includes a plurality of mobile stations/mobile terminals in communication with BS or LES or GES defines and distributes the maximum number of channels that can be used to operate in a connection. Halvorson further discloses making use of or switching to FEC coding during a blockage/interference with respect to outbound and inbound signaling with respect to changes in resources being utilized in a connection, and monitoring blockage/interference which decreases quality of signaling (col. 19, line 19-30, col. 20, line 53 thru col. 21, line 16, thru col. 22, line 61). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement coding with respect to in-band signaling as well as out-bound signaling as taught by Halvorson with the combined teachings of Alvesalo and Lin for the purpose of further managing and monitoring resource in a mobile radio environment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

November 7, 2006

CHI PHAM
SUPERVISORY PATENT EXAMINER

11/13/06